

CONTENTS—VOLUME 13

Number 1

Editorial: *Leukemia Research* thirteen years on
A case-control study of aplastic anemia

Indirect induction of differentiation of normal and leukemic myeloid cells by recombinant interleukin 1

Effects of simultaneous and sequential exposure to granulocytic and monocytic inducers on the choice of differentiation pathway in HL-60 promyelocytic leukemia cells

Higher T-cell imbalance and growth factor receptor expression in B-cell chronic lymphocytic leukemia (B-CLL) as compared to monoclonal B-cell lymphocytosis of undetermined significance (B-MLUS)

Increased sensitivity to 1- β -D-arabinofuranosylcytosine in P388 murine leukemic cells resistant to etoposide

Monoclonal antibody directed to human T-cell malignancy antigen

Oncogene expression in Rauscher murine leukemia virus induced erythroid, myeloid and lymphoid cell lines

S-100 antigen and calmodulin in human leukemic cells

The elimination of malignant B lymphocytes from human bone marrow using monoclonal antibodies DLC-48 and LN-1 and human serum: a preclinical study

Acceleration of a murine T-cell leukemia associated with loss of interleukin-3 producing activity

Expression of haematopoietic progenitor cell-associated antigen BI-3C5/CD34 in leukaemia

Cytotoxic effects on viable human leukemic cells by combinations of lymphokine activated killer cells and monoclonal antibodies

Case Report

Poorly expressed CD2 antigen on the leukemic cells of adult T-cell leukemia and chronic lymphocytic leukemia of T-cell lineage

- 1 T. Hamblin
- 3 M. S. Linet, J. A. Markowitz,
L. L. Sensenbrenner, S. G. Warm, S. Weida,
M. L. Van Natta and M. Szklo
- 13 J. Lotem and L. Sachs
- 23 S. Zinzar, T. Ohnuma and J. F. Holland
- 31 C. Garcia, A. Rosén, E. Kimby,
M. Aguilar-Santelises, M. Jondal, M. Björkholm,
G. Holm and H. Mellstedt
- 39 M. Higashigawa, M. Ido, T. Ohkubo,
H. Kawasaki, H. Kamiya, M. Sakurai, K. Taniguchi
and M. Hamazaki
- 43 M. Minegishi, S. Tsuchiya, N. Minegishi,
O. Yoshie and T. Konno
- 53 N. J. de Both, M. J. M. van der Feltz, A. Mooren,
D. Vermaas, P. Klaassen, E. H. Rhijnsburger and
M. E. Kranendonk-Odijk
- 65 H. Wada, S. Shirakawa, T. Yamakado,
S. Ohkubo, T. Tanaka, T. Yamamoto and
H. Hidaka
- 71 J. N. Winter, A. L. Epstein, B. Bass and
R. J. Marder
- 77 A. Kuriu, J. Fujita, Y. Kanakura, T. Yonezawa,
K. Yoshida and Y. Kitamura
- 83 D. Batinić, R. Tindle, D. Boban, A. Tiefenbach,
L. Rajić, B. Labar, D. Nemet and M. Boranić
- 87 G. Vasilopoulos, A.-M. Sjögren and
P. Reizenstein
- 93 K. Tamura, K. Sagawa, H. Satoh, J. Torigoe,
N. Kimura, Y. Araki and S. Makino

101 Announcements

Number 2

Immunoglobulin and T-cell receptor gene rearrangements in Hodgkin's disease and Ki-1-positive anaplastic large cell lymphoma: dissociation between phenotype and genotype

Human myeloid cells possessing high-affinity receptors for granulocyte-macrophage colony stimulating factor

- 103 H. Herbst, G. Tippelmann, I. Anagnostopoulos,
J. Gerdes, R. Schwarting, T. Boehm, S. Pileri,
D. B. Jones and H. Stein
- 117 P. V. Byrne

Cooperative effects of human recombinant granulocyte-macrophage colony stimulating factor and human recombinant erythropoietin in inducing erythroid differentiation of the human erythroleukaemia cell line K562 clonogenic cells

Evidence of recombinant ecotropic provirus integration in thymic lymphomas induced by direct or indirect radiation effects

Evidence for the *in vivo* production of interleukin-3 in lethally irradiated mice transplanted with syngeneic murine splenocytes

Synergistic effect of methotrexate and 1- β -D-arabino-furanosylcytosine on the generation of DNA strand breaks in a human promyelocytic leukemia cell line

Medium pH determines the differentiation of human promyelocytic leukemia cells to basophils or eosinophils by culturing in a protein- and serum-free medium

Proto-oncogene expression during early myeloid differentiation of normal peripheral blood progenitor cells

Diagnostic significance of dysplastic features of peripheral blood polymorphs in myelodysplastic syndromes

IMP dehydrogenase: inhibition by the anti-leukemic drug, tiazofurin

C-myc protein kinetics during growth and differentiation of CD34 (MY10)-positive blast cells from normal human marrow

Increasing the accumulation of daunorubicin in human leukemic cells by prolonging the infusion time

127 H. Tawhid, W. Labastide, C. Barker and J. Rees

131 H. Baylac-Kalabokias, T. Astier-Gin, B. Borremans, E. Legrand, R. Hooghe, M. P. Houben-Defresne, M. Janowski, J. F. Duplan and B. Guillemain

145 M. Hirokawa, H. Takatsu, A. Chubachi, K. Kudo, T. Takahashi, K. Yoshida and A. B. Miura

151 A. Tanizawa, M. Kubota, T. Takimoto, T. Kito, Y. Akiyama, Y. Kiriya and H. Mikawa

157 K. Muroi, R. Sasaki, Y. Miura and K. Ohyashiki

165 M. R. Baer, Xue Zhi Gao, H. Sato, P. Singh and H. D. Preisler

173 R. Hast, I. Nilsson, S. Widell and Å. Öst

179 Y. Yamada, Y. Natsumeda, Y. Yamaji, H. N. Jayaram, G. J. Tricot, R. Hoffman and G. Weber

185 M. A. Bains, P. Baines, J. Hodgetts, T. G. Hoy and A. Jacobs

191 C. Paul, U. Tidefelt, J. Liliemark and C. Peterson

197 Announcements

Number 3

Editorial: Management of multiple myeloma

Human acute lymphoblastic leukemia cell lines with characteristics of intracлонаl variation in B-cell differentiation stage

Stimulation of CFU-Mk colony growth by normal plasma and plasma from myelodysplastic patients

Studies on sensitivity of human GM-CFU and L-CFU to hyperthermic killing *in vitro*

γ -IFN induces a differential expression of HLA-DR, DQ and DP antigens on peripheral blood myeloid leukemic blasts at various stages of differentiation

Treatment of fetal bovine serum with activated charcoal enhances spontaneous differentiation of murine erythroleukemia cells

Tissue specificity in the expression of Friend erythroleukemic virus sequences in infected mouse tissues

Reactivity of a new Pan-B monoclonal antibody (MA6) against human leukaemias

Characterization of clonogenic cells in refractory anemia with excess of blasts (RAEB-CFU): response to recombinant hematopoietic growth factors and maturation phenotypes

199 P. Reizenstein

203 T. Hirata, Y. Matsuo, N. Sadamori, O. Iryo, K. Yoshimoto and M. M. Yokoyama

213 M. Podolak-Dawidziak

217 Wan-ming Da, Yuan Liu and Shu-nan Wei

221 M. Lecchi, E. Lovisone, C. Genetta, D. Peruccio, L. Resegotti and P. Richiardi

227 T. Murate and T. Kaneda

233 M. E. Joesten, M. E. Royston and B. G.-T. Pogo

241 Z. Chen, M. H. Tang, K. H. Chan, M. H. Ng and R. Liang

245 H. C. Schouten, R. Delwel, F. J. Bot, A. Hagemeijer, I. P. Touw and B. Löwenberg

Contrasting effect of IFN- γ and IFN- α/β on differentiation of some clones of mouse myeloid leukemic cells

Abnormalities in T-cell associated rearrangement of T-cell receptor gamma chain genes in B-cell chronic lymphocytic leukemia

- 253 Y. Yamamoto-Yamaguchi, M. Tomida and M. Hozumi
- 259 B. F. Leber, J. J. Murphy and J. D. Norton
- 267 Announcements

Number 4

Enzyme activities of leukemic cells and biochemical changes induced by deoxycoformycin *in vitro*—lack of correlation with clinical response

In K562 leukemia cells treated with doxorubicin and hemin, a decrease in c-myc mRNA expression correlates with loss of self-renewal capability but not with erythroid differentiation

Lithium and hydrocortisone interactions on cell growth and gene expression in human promyelocytic leukemia (HL60)

Human interleukin 4 regulates the phenotype of lymphocytes generated during mixed lymphocyte culture and inhibits the IL-2-induced development of LAK function in normal and leukaemic cells

Flow cytometric DNA analysis: a prognostic tool in non-Hodgkin's lymphoma

Release of natural killer cytotoxic factor in patients with lymphoproliferative disease of granular lymphocytes

Limiting dilution analysis of the frequency of IL2 responsive T cells in lymph nodes involved by B-cell non-Hodgkin's lymphomas

Comparison of erythroid progenitor cell growth *in vitro* in polycythemia vera and chronic myelogenous leukemia: only polycythemia vera has endogenous colonies

Phase II trial of fenretinide [N-(4-hydroxyphenyl) retinamide] in myelodysplasia: possible retinoid-induced disease acceleration

- 269 A. D. Ho, K. Ganeshaguru, W. Knauf, G. Dietz, I. Trede, A. V. Hoffbrand and W. Hunstein
- 279 G. Toffoli, A. Viel, C. Bevilacqua, R. Maestro, L. Tumiotto and M. Boiocchi
- 289 S. C. Knight, D. Harnish, E. Scheid, M. Koekebakker and R. D. Barr
- 297 B. Jin, A. F. Lopez, S. Gillis, C. A. Juttner, M. A. Vadas and G. F. Burns
- 307 B. Christensson, C. Lindemalm, B. Johansson, H. Mellstedt, B. Tribukait and P. Biberfeld
- 315 R. Zambello, L. Trentin, C. Agostini, T. Chisesi, M. Vespignani, G. Pizzolo, F. Pandolfi, F. Ensoli and G. Semenzato
- 323 T. Bonnefoix, M.-P. Piccinni, M.-C. Jacob, B. Pegourie and J.-J. Sotto
- 331 R. S. Weinberg, A. Worsley, H. S. Gilbert, J. Cuttner, P. D. Berk and B. P. Alter
- 339 H. S. Garewal, A. List, F. Meyskens, A. Buzaid, B. Greenberg and S. Katakhar
- 345 Announcements

Number 5

Editorial

The toxicity of the bone seeking radionuclides

Review

Mechanisms of drug resistance in acute leukaemia

Morphometric analysis of chronic B-cell leukemias—an aid to the classification of lymphoid cell types

Specific chromosome changes and non-occupational exposure to potentially carcinogenic agents in acute leukemia in China

Immunohistological assessment of bone marrow biopsies from patients with hairy cell leukemia: changes following treatment with alpha-2-interferon and deoxycoformycin

- 347 F. W. Spiers and J. Vaughan
- 351 A. Hall, A. R. Cattani and S. J. Proctor
- 357 D. Robinson, P. Lackie, V. Aber and D. Catovsky
- 367 You-Sheng Li, Yu-Lan Zhao, Qi-Po Jiang and Cong-Li Yang
- 377 J. Thaler, H. Denz, O. Dietze, G. Gastl, A. D. Ho, C. Gatringer, R. Greil, M. Lechleitner, C. Huber and H. Huber

Effect of 5637-conditioned medium on peripheral blood granulocyte-macrophage progenitors in normal subjects and patients with the myelodysplastic syndrome

A new approach to the detection of DNA damage

Induction of leukemic infiltration by allogeneic transfer of HTLV-1-transformed T cells in rabbits

HL-R5 and HL-D4: two differentiation resistant HL-60 variants

Ecotropic virus involvement in spontaneous B-cell lymphomas of CWD/LeAgl mice

385 G. B. Tennant and A. Jacobs

391 M. Kawamura and H. D. Preisler

399 K. Ogawa, S. Matsuda and A. Seto

407 D. C. Darling, M. H. K. Linskens and F. Farzaneh

417 J. M. Angel and H. G. Bedigian

427 Announcements

Number 6

Editorial

Randomized controlled trials in hematologic malignancies

Delayed maturation of skin window macrophages in myelodysplastic syndromes

Combined effects of interferon and steroid hormones on 2'5'-oligoadenylate synthetase activity in chronic lymphocytic leukemia cells

Deletion of c-ets1 and T3y loci from the 11q- chromosome in the human monoblastic cell line U937

Whole blood assay for NK activity in splenectomized and non-splenectomized hairy cell leukemia patients during IFN- α -2b treatment

Leucocyte superoxide dismutase levels in acute and chronic leukemias

The oncogene ETS1 is distant from the chromosome 11 breakpoint in leukaemic cells with the t(11;19)(q23;p13)

The epidemiology of non-Hodgkin's lymphoma in the North-East of Italy: a hospital-based case-control study

T-cell receptor gene rearrangement in B-cell non-Hodgkin's lymphoma: correlation with methylation and expression

The significance of the ratio of blood to marrow hematopoietic progenitors (CFU-GM and CFU-GEMM) in relation to disease state of patients with acute lymphoblastic leukemia

Sensitivity of fresh leukemic cells to T101 ricin A-chain immunotoxin: a comparative study between Fab fragment and whole Ig conjugates

Brief Communication

Effect of CD3 antibodies on cytotoxicity against leukemic cells resistant to activated killer cells

Meeting Report

4th International Workshop on CLL

429 D. V. Razis

433 H. Zwierzina, N. Sepp, E. Ringler and F. Schmalzl

437 P. L. Triozzi, K. B. Avery, H. M. Abou-Issa and Ting-Chao Chou

445 J. Shipley and D. Sheer

451 B. Nielsen, P. Hokland, J. Ellegaard, H. Hasselbalch and M. Hokland

457 E. Kökoğlu, G. Aktuğlu and A. Belce

459 M. A. Kennedy, C. M. Morris and P. H. Fitzgerald

465 S. Franceschi, D. Serraino, E. Bidoli, R. Talamini, U. Tirelli, A. Carbone and C. La Vecchia

473 B. F. Leber, P. Amlot, A. V. Hoffbrand and J. D. Norton

483 D. S. Chervinsky, C. K. Tebbi and A. I. Freeman

491 M. Chiron, J. M. Derocq, E. Kuhlein, F. Roubinet, C. Demur, H. Grandjean, F. Huguet, J. P. Jaffrezou, F. Jansen and G. Laurent

501 P. Reizenstein and G. Vasilopoulos

505 R. P. Gale, J.-L. Binet, D. Catovsky, G. Dighiero, E. Montserrat, K. Rai, C. Rozman and A. Sawitsky

Letters to the Editor

Comments on "Differences in DNA-fingerprints between remission and relapse in childhood acute lymphoblastic leukemia"

Reply to the Comments

511 S. A. Ridge and M. Worwood

511 S. Pakkala and L. Peltonen

513 Announcements

Number 7

Editorial

Are low doses of radiation leukemogenic in children?

Immunological phenotypic pattern of acute lymphoblastic leukaemia in Egypt

The role of marrow accessory cell populations in the augmentation of human erythroid progenitor cell (BFU-E) proliferation by prostaglandin E

Cytogenetic studies on the adult T-cell leukemia in Japan

Alteration of intracellular actin levels induced by phorbol diester in human HL-60 leukemia cells susceptible or resistant to differentiation, and the effects of protein kinase inhibitors

Characterization of cell markers in type B retroviral-induced thymic lymphomas—I. Surface antigen phenotype and karyotype in developing and primary lymphomas

Characterization of cell markers in type B retroviral-induced thymic lymphomas—II. Surface antigen phenotype, karyotype and proviral integration pattern in cultured lymphoma cells and cloned lines

Impaired *in-vitro* proliferation of hemopoietic precursors in HIV-1-infected subjects

The DNA synthesis of leukemic (L₂C) guinea pig B lymphocytes involves a permanent activation of protein kinase C without corresponding phosphoinositide hydrolysis

Differential sensitivity to (*d*l)-5-methyltetrahydrofolate of normal CFU-GM and HL-60 cells

Specific binding of radioiodinated human GM-CSF to the blast cells of acute myeloblastic leukemia

Treatment of RAEB-t with intensive chemotherapy and GM-CSF

Maturation induction in freshly isolated human myeloid leukemic cells, 1.25 (OH)₂ vitamin D₃ being the most potent inducer

The effects of thymidine on deoxyribonucleotide pool levels, cytotoxicity and mutation induction in Friend mouse erythroleukaemia cells

Quantitative morphological aspects of granulocytic differentiation induced in HL-60 cells by dimethylsulfoxide and retinoic acid

515 U. Båverfäst and M. Holmberg

519 A. M. Kamel, M. M. Assem, E. S. Jaffe, I. Magrath, M. I. Aboul Enein and D. S. Hindawy

527 K. H. Nocka, O. G. Ottman and L. M. Pelus

535 K. Fujita, Y. Yamasaki, H. Sawada, Y. Izumi, S. Fukuhara and H. Uchino

545 Y. Uemura, M. Nishikawa, F. Komada and S. Shirakawa

553 R. E. Mueller, J. K. Ball and F. P. H. Chan

561 R. E. Mueller, J. K. Ball and F. P. H. Chan

573 Y. Lunardi-Iskandar, V. Georgoulas, A. M. Bertoli, Y. Augery-Bourget, A. Ammar, D. Vittecoq, W. Rosenbaum, P. Meyer and C. Jasmin

583 H. J. Vial, M. R. Parant, J. S. Marie, A. M. Laurent and C. J. Le Peuch

595 V. Gattei, P. A. Bernabei and P. R. Ferrini

599 I. Murohashi, S. Tohda, T. Suzuki, K. Nagata, Y. Yamashita and N. Nara

605 F. Brito-Babapulle, J. A. D. Lord and D. N. Whitmore

609 G. J. Ossenkoppele, P. W. Wijermans, J. J. P. Nauta, P. C. Huijgens and M. M. A. C. Langenhuijsen

615 Y. A. Wilkinson and P. G. McKenna

621 J. Dufer, D. Biakou, P. Joly, H. Benoist, Y. Carpentier and A. Desplaces

Brief Communication

An attempt to select pseudonormal revertants of Friend erythroleukaemia cells using cytochalasin B

Open Forum

Differentiation induction therapy of myelodysplastic syndromes

629 R. Neill and I. Hickey

633 H. T. Hassan and J. Rees

Number 8

Review

Etoposide in leukemia, lymphoma and bone marrow transplantation

The *c-myc* oncogene is regulated independently of differentiation in myeloid cell lines

Host metaphases after chemoradiotherapy and allogeneic bone marrow transplantation for acute non-lymphoblastic leukemia

The pattern of myeloid suppression and recovery after the addition of methotrexate to murine long-term bone marrow culture

Evidence for a factor in normal human serum that induces human neutrophilic granulocyte end-stage maturation *in vitro*

Hemoglobin induction by Ara-C in human erythroleukemic cells (K562) is cell-cycle dependent

Expression of a novel human pan leucocyte differentiation antigen on leukaemic cells

In vitro and *in vivo* cytotoxic activity of anti-human leukemia monoclonal antibodies SN5c and SN6 daunorubicin conjugates

Establishment and partial characterization of a radiation-induced canine monocytic leukemic cell line (RK9ML-1)

Mechanism of action of 5-AZA-dC: induced DNA hypomethylation does not lead to aberrant gene expression in human leukemic CEM cells

639 E. A. Stadtmauer, P. A. Cassileth and R. P. Gale

651 P. Roberts, M. Jones, R. Gale, S. Thomas, N. Tidman and D. Linch

661 D. Przepiorka, R. Ramberg and E. D. Thomas

667 K. Bhaskara Udupa and D. A. Lipschitz

673 W. H. Evans, S. M. Wilson, J. M. Bednarek, E. A. Peterson, R. D. Knight, M. G. Mage and L. McHugh

683 P. E. Wanda and M. M. Walker

689 A. Henniker, K. F. Bradstock, K. Atkinson, S. Barclay, A. Kabral and P. Grimsley

699 W. C. Biddle, Y. Haruta, B. K. Seon, E. S. Henderson and E. J. Sarcione

709 T. Kawakami, G. Cain and N. Taylor

715 J. Bouchard

723 Announcements

Number 9

Editorial

What is hybrid acute leukemia?

A simple method for short term culturing bone marrow and unstimulated blood from acute leukemias

Acute lymphoblastic leukemia of NK-cell lineage: responses to IL-2

Induction of aplastic anemia by intra-bone marrow inoculation of a molecularly cloned feline retrovirus

Adaptation of human leukemia HL-60 cells to hydrogen peroxide as oxidative stress

Distribution of injected monoclonal antibody in lymphoma-infiltrated spleen

725 V. Maitreya and R. P. Gale

729 M. J. Macera, P. Szabo and R. S. Verma

735 S. J. Pirruccello, M. S. Bick, B. G. Gordon, K. Gajl-Peczalska, D. J. Gnarra and P. F. Coccia

745 R. E. Dornsife, P. W. Gasper, J. I. Mullins and E. A. Hoover

757 I. Kasugai and M. Yamada

763 L. M. Cobb, S. Butler and J. Humphreys

Pedigree analysis of aryl hydrocarbon hydroxylase inducibility in acute leukemia of childhood

5-Bromodeoxyuridine (BUdR) quenching of acridine orange fluorescence distinguishes cycling and non-cycling normal and malignant bone marrow cells *in vitro*

B lymphocyte regeneration in marrow and blood after autologous bone marrow transplantation: increased numbers of B cells carrying activation and progression markers

Cytofluorometric analysis of thymic interdigitating cells from C57BL/6 mice prior and after leukemogenic X-irradiation

Disruption of stromal niches by diffusible factors in the conditioned media of leukemic cell-lines and sera of chronic myelogenous leukemia patients

Chromosome 6p rearrangements appear to be secondary changes in various haematological malignancies

Studies on the suppression of HL-60 cell growth *in vitro* by low molecular weight suppressor of human fetal liver origin

Correlation of bone marrow colony growth in the myelodysplastic syndromes with the FAB classification and the Bournemouth score

Development and validation of a cellular transplant model for leukemia in Fischer rats: a short-term assay for potential anti-leukemic chemicals

HLA-DR molecules on ALL cells are electrophoretically unique

Endothelial cell receptors on leukemic plasma cells

771 T. S. Yamashita, D. Frank, R. Dunn, S. J. Gross and J. L. Blumer

781 A. M. Maddox, D. A. Johnson and M. J. Keating

791 M. Bengtsson, B. Smedmyr, R. Festin, G. Öberg, B. Simonsson and T. H. Tötterman

799 E. Sprecher, H. Giloh, E. Rahamim, E. Yefenof and Y. Becker

811 A. Shetty, V. K. Bapna and S. G. A. Rao

819 J. L. Huret, M. Schoenwald, A. Brizard, F. Guilhot, E. Vilmer and J. Tanzer

825 Chu-tse Wu, Yu-zhi Wang and Xue-tao Pei

833 D. G. Oscier, A. Worsley, S. Darlow, A. Figes, J. D. Williams and T. J. Hamblin

841 M. P. Dieter, C. W. Jameson, J. E. French, S. Gangjee, S. A. Stefanski, R. S. Chhabra and P. C. Chan

851 J. M. Pesando, P. Hoffman and M. A. Stucki

863 V. Kalász, T. Pap, G. Csanaky and G. Kelényi

Number 10

Studies on the relationship between protein kinase C and differentiation of human promyelocytic leukemia cells induced by retinoic acid

Comparison of dexamethasone and lovastatin (mevinolin) as growth inhibitors in cultures of T-cell derived human acute leukemia lines (CEM)

Cell to cell contact enhances the proliferation of acute myeloid leukemia (AML) cells *in vitro* without an apparent role of adhesion glycoproteins LFA1, MAC1 and P150-95

Phenotyping of acute myelomonocytic (AMMOL) and monocytic leukemia (AMOL): association of T-cell-related antigens and skin-infiltration in AMOL

Leukaemia and nutrition I: malnutrition is an adverse prognostic factor in the outcome of treatment of patients with standard-risk acute lymphoblastic leukaemia

New molecular marker in AML: DNA-fingerprint differences between leukemic phase and remission in acute myeloid leukemia

Characterization of lympho-myeloid-erythroid-megakaryocytic stem cells in peripheral blood of hairy cell leukemia patients

Clinical value of long-term maintenance chemotherapy in 5-year survivors of acute leukemia

869 Xingzhong Wu, Guoying Shao, Surong Chen, Xuewen Wang and Zhen-Yi Wang

875 N. Bansal, A. G. Houle and G. Melnykovich

883 A. Pulsoni, R. Delwel, M. Salem, I. Touw and B. Löwenberg

893 M. Schwonzen, N. Kuehn, B. Vetten, V. Diehl and M. Pfreundschuh

899 E. Lobato-Mendizábal, G. L. Ruiz-Argüelles and A. Marín-López

907 S. Pakkala, P. Helminen, T. Ruutu, U. M. Saarinen and L. Peltonen

915 R. Michalewicz, S. Baron, S. Brill and E. Sahar

921 K. Kawashima, N. Hamajima, K. Yamada and H. Saito

Efficient formation of cytosine arabinoside-5'-triphosphate in leukemic blasts of human T-cell acute lymphoblastic leukemia

Low IL-1 beta production in leukemic cells from progressive B cell chronic leukemia (B-CLL)

Brief Communication

A novel dye exclusion assay for measurement of cell response following *in vitro* exposure to radiation or drugs

Letter to the Editors

Soluble interleukin-2 receptor released locally as an indicator of central nervous system relapse in adult patients with acute lymphoblastic leukemia

931 M. Tanaka and S. Yoshida

937 M. Aguilar-Santelises, J.-F. Amador, H. Mellstedt and M. Jondal

943 J. A. Hanson, E. A. Bean, S. R. Nute and J. L. Moore

949 Chao-Sung Chang, Hong-Wen Liu, Sheng-Fung Lin and Tyen-Po Chen

951 Announcement

Number 11

Recombinant lymphotoxin enhances the growth of normal, but not of chronic myeloid leukemic, human hematopoietic progenitor cells *in vitro*

PMN cells from chronic myeloid leukemia (CML) patients show defective chemotaxis in remission

Prognostic implication of sequential bone marrow cultures in the myelodysplastic syndromes

Proliferative response of highly purified B chronic lymphocytic leukemia cells in serum free culture to interleukin-2 and tumor necrosis factors alpha and beta

Cytotoxicity of methotrexate and trimetrexate and its reversal by folinic acid in human leukemic CCRF-CEM cells with carrier-mediated and receptor-mediated folate uptake

A new experimental model for *in vivo* studies on differentiation and proliferation of leukemic cells using a mouse myeloid leukemia aneuploid line

Prolonged survival of mice with myeloid leukemia by subcutaneous injection of recombinant human G-CSF

Polyclonal increase of HTLV-I provirus-carrying lymphocytes in HTLV-I-carrier rabbits transplanted with Shope carcinoma cells

Ph-negative T cells in a patient with chronic myelogenous leukemia for twenty-eight years

Detection of *fos* oncogene products by monoclonal antibody FO-120 in lymphoproliferative disorders

953 U. Gullberg and E. Nilsson

959 N. R. Naik, S. H. Advani and A. N. Bhisey

967 Y. Yoshida, C. Yoshida, K. Tohyama, S. Ohmori, M. Ohmori, Y. Ueda, Y. Taniguchi and H. Uchino

973 R. Moberts, H. Hoogerbrugge, T. van Agthoven, B. Löwenberg and I. Touw

981 L. J. van der Veer, G. R. Westerhof, G. Rijksen, J. H. Schornagel and G. Jansen

989 M. Hayashi, J. Okabe-Kado and M. Hozumi

1001 M. Bessho, K. Susaki, K. Hirashima, M. Tamura and M. Ono

1009 K. Ogawa, M. Kawanishi, S. Matsuda, T. Isono and A. Seto

1019 P. C. Nowell, J. B. Finan, J. S. Moore, L. Jackson and A. Weiss

1025 T. Kanaitsuka, Y. Namba, Y. Zu, K. Ishii, T. Ashihara, M. Hanaoka and T. Suchi

Number 12

Annotation

Is transplantation in first remission AML more effective than in advanced leukemia?

Review

Rational use of biological response modifiers in hematological malignancies—a review of treatment with interferon, cytotoxic cells and antibodies

1035 R. P. Gale and A. Butturini

1039 C. H. Janson, Mahmood Tehrani, H. Wigzell and H. Mellstedt

Effects of an anti HLA-DR immunotoxin on leukaemia cells and hematopoietic progenitors

Detection of BrdU in the regenerating bone marrow cells of a patient with AML

Molecular characterization of Ph⁺ hybrid acute leukemia

Blood responses under chronic low daily dose gamma irradiation: I. Differential preclinical responses of irradiated male dogs in progression to either aplastic anemia or myeloproliferative disease

Suppression of mast cell colony formation by a low molecular weight fraction of fetal calf bone marrow extract

Induction of differentiation in HL-60 cells by retinoic acid and lymphocyte-derived DIF but not by recombinant G-CSF and GM-CSF

Analysis of cellular heterogeneity in the response of human leukemic cells to photosensitization induced by pyrene-containing fatty acid

Regulation of IgM biosynthesis in human chronic lymphocytic leukemia. Normal and neoplastic B cells respond differently to TPA

Effects of retinoic acid, 1,25-dihydroxyvitamin D₃, cytosine arabinoside and α -interferon on bone marrow cells from patients with myelodysplastic syndromes

Reversal of enzymic phenotype of thymidine metabolism in induced differentiation of HL-60 cells

Hemopoietic features of splenectomized mice bearing IL-3 producing T cell leukemia

1047 C. Demur, J. M. Derocq, P. Poncelet, M. Chiron, F. Roubinet, J. P. Jaffrezou, C. Bordier and G. Laurent

1055 A. Raza, S. Gezer, I. Mehdi and H. D. Preisler

1061 F. Lo Coco, G. Basso, P. F. di Celle, A. Tassinari, D. Pasqualetti, M. R. De Cuia, M. C. Putti, G. Del Poeta, C. Ponzetto, G. Saglio and R. Foa

1069 T. M. Seed, B. A. Carnes, D. V. Tolle and T. E. Fritz

1085 M. Lenfant, D. Sotty, J. Wdzieczak-Bakala, K. Itoh, K. Shirata, K. Sugimoto and K. J. Mori

1091 Sheng-Yuan Wang, Shih-Tung Liu, Shur-Jen Wang and Chi-Kuan Ho

1099 E. Fibach, E. A. Rachmilewitz and S. Gatt

1105 S. Guazzi, R. Sitia and A. Rubartelli

1113 E. Hellström, K. H. Robèrt, E. Soppi, Å. Öst, P. O. Putkonen and G. Gahrton

1123 Y. Hashimoto, T. Shiotani, J. Fujita, Y. Yamaji, H. Futami, N. Yamauchi, M. Bungo, H. Nakamura, T. Tanaka and S. Irino

1131 H. Sawada, K. Sugimoto, K. Aramaki and K. J. Mori

i Volume 13 Title Section, Contents and Author Index